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Judicial primers—A unique collaboration between science and law

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**Judicial Primers – a unique collaboration between science and law.**

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## **Judicial Primers – a unique collaboration between science and law.**

The Florentine renaissance of the 15<sup>th</sup> Century facilitated an enduring bond between philosophical reasoning and empirical measurement and its longevity was ensured when conveyed to the world through art and literature. This paradigm shift of interdisciplinary creativity forged unexpected collaborations and transformed for ever the relationship between science, art and society. The enduring strength that emanates from forging new symbiotic partnerships that foster genuine interdisciplinary respect lies behind the rationale for the new Judicial Primers project, devised and owned by the UK Judiciary, written by scientists and endorsed by the UK National Scientific Academies.

In 2014, The Lord Chief Justice of England and Wales (Lord Justice Thomas) identified in his Kalisher lecture<sup>1</sup> to the bar, that he wished to see the development of a series of ‘judicial primers’ to aid with the understanding of science in the courtroom. These pieces of ‘simple’ prose would act as guides for judges and would be restricted to areas where there is consensus amongst the scientific community of the value and foundation of current scientific methodologies. Each primer would be written in ‘plain English’ and its purpose would be to assist the judge to better understand the scientific validity of an evidence type, thereby engendering confidence that scientific evidence presented to a jury has genuine credibility. The primers were to be designed to assist the judge in understanding the scientific concepts underpinning of the expert evidence which is tendered, and to be a place where limitations in current thinking could be represented clearly and without bias.

The judicial primers project has now commenced and is a unique collaboration between members of the senior judiciary and Fellows of the Royal Society and the Royal Society of Edinburgh – the UK National Academies of Science. A high-level steering committee, chaired by Lord Hughes of Ombersley, oversaw the selection of the first two evidence types to be considered and an editorial board and a writing group was appointed for each primer. The primers were written by leading scientists and members of the judiciary, peer reviewed by 20 judges, 10 senior scientists and 10 forensic practitioners within the field of the subject of each primer. Each primer was then approved by the Councils of the Royal Society and the Royal Society of Edinburgh before publication. In November of 2017, the first two judicial primers were completed – DNA analysis<sup>2</sup> and Gait analysis<sup>3</sup> and launched under the imprimatur of both the Royal Society and the Royal Society of Edinburgh.

These are the first in a series of documents whose purpose is to communicate agreed and verifiable science to the Judiciary in an impartial, authoritative but non-controversial and easy to read manner. Each primer also signposts any limitations of the science and challenges associated with its application. The documents establish common scientific ground rather than resolving the cutting-edge limits of the science. The intention of the primer series is to cover as many evidence types as the judiciary feel is required, through their practice and experience and the first two were selected to represent extremes that may be encountered. The primers are living documents which can be updated regularly as research and legal precedents dictate.

‘*Forensic DNA analysis: A Primer for courts*’ is a 57-page document that explains areas such as short tandem repeats, Y-chromosome detection, mitochondrial DNA and the comparison of DNA profiles. This is an area of forensic science evidence which is encountered frequently in the courtroom and has a strong credibility in the research literature originating from medical research and subsequently translated into the forensic field. That some areas of controversy remain and indeed emerge, are typical of any scientific discipline and the ‘live’ nature of the primers makes these documents of great assistance to the judiciary as it provides them with access to the latest thinking.

'Forensic gait analysis: A Primer for courts' is a smaller 26-page document which is befitting the level of scientific research that underpins the subject within the forensic science context. Much of the background science originates from areas such as biomechanics or clinical gait analysis, but the volume and robustness of research within the forensic domain for the purposes of comparing suspect and perpetrator manner of locomotion, is scant. As the subject is one that few judges will have encountered previously in their working career, and as it gains higher prevalence as a consequence of automatic recognition software, it is important that the judiciary are comfortable with the underpinning research within the domain so that they may consider admissibility of such evidence in an informed way.

Of the primers, Supreme Court Justice Lord Anthony Hughes said "*I am confident that the primers will enable a judge in advance of the hearing to read up on the science, to have a reliable overview of the state of the science and then be able to ask the right questions. This will provide confidence to ensure that evidence which is not helpful is excluded and evidence which is helpful is presented in a way in which a jury will understand and which will advance the understanding of the issues in the case generally.*"

Anecdotal evidence thus far has produced strong support from the UK judiciary and genuine enquiry from judicial institutions in other countries especially those who also follow an adversarial legal system. Subsequent primers are in progress and include statistics and vehicle collisions. In the future, topics such as facial recognition, ballistics, analysis of drugs and witness memory may be considered. The Judicial primer project is unique, born out of the vision of a Judicial leader and his legal and scientific colleagues who truly appreciated the value and contribution that science makes to the delivery of justice. The documents are symptomatic of a new and unprecedented collaboration between law and science in the UK and has created a paradigm shift within our criminal justice system.

Hard copies of the primers have been distributed to courts in England and Wales, Scotland and Northern Ireland through the Judicial College, the Judicial Institute, and the Judicial Studies Board for Northern Ireland. The primers are also available to download from the Royal Society and Royal Society of Edinburgh websites.

<sup>1</sup> <https://www.judiciary.gov.uk/wp-content/uploads/2014/10/kalisher-lecture-expert-evidence-oct-14.pdf>

<sup>2</sup> [http://www.rse.org.uk/wp-content/uploads/2017/11/DES4928\\_2\\_Law-primers-reports\\_DNA-analysis\\_WEB.pdf](http://www.rse.org.uk/wp-content/uploads/2017/11/DES4928_2_Law-primers-reports_DNA-analysis_WEB.pdf)

<sup>3</sup> [http://www.rse.org.uk/wp-content/uploads/2017/11/DES4929\\_2\\_Law-primers-reports\\_Gait-analysis\\_WEB.pdf](http://www.rse.org.uk/wp-content/uploads/2017/11/DES4929_2_Law-primers-reports_Gait-analysis_WEB.pdf)